

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Tohru KIKUCHI

Title: TRANSMISSION DIRECTIONAL ANTENNA CONTROL SYSTEM,
BASE STATION, AND TRANSMISSION DIRECTIONAL
ANTENNA CONTROL METHOD USED FOR SYSTEM AND
BASE STATION

Appl. No.: Unassigned

International Filing Date: 01/18/2005
371(c) Date: 07/20/2006

Examiner: Unassigned

Art Unit: Unassigned

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicant in order to comply with Applicant's duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the date of entry of the national stage as set forth in 37 CFR §1.491.

RELEVANCE OF EACH DOCUMENT

Documents A1 and A2 are U.S. counterparts of Document A13, which relates to radio communications equipment using adaptive array antenna to reduce the transmission electric power of a base station and to increase the number of simultaneous terminal connections.

Document A3 is a U.S. counterpart of Document A8.

The relevance of Document A11 is described in the present application.

Document A4 is a U.S. counterpart of Document A10, which relates to a transmission antenna directivity control device and method therefore, which can improve the transmission direction precision of a transmitted beam with a simple structure..

Document A5 is a U.S. counterpart of Document A14, which relates to a multi-beam antenna system for radio base station to perform transmission beam forming when incoming signals are present and to stop the transmission beam forming when the incoming signals are not present.

Document A6 is a U.S. counterpart of Document A12, which relates to radio communications equipment using adaptive array antenna, which reduces the transmission electric power of a base station and increases the number of simultaneous terminal connections by calculating the subspaces of respective terminals and buses.

Document A9 relates to a device and method for radio communication which prevents the diversity effect of a diversity system, generally applied to a down line of a CDMA radio

communication system, from becoming worse and to prevent transmitting electric power from being dissipated.

Documents A7, A8, A12 and A15, listed on the attached PTO/SB/08, were cited as being relevant during the prosecution of the corresponding International application. A copy of the International Search Report is attached setting forth the portion of each document considered relevant by the examiner. An English-language counterpart of the foreign-language documents has been provided.

Applicant respectfully requests that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

Respectfully submitted,

Date: July 20, 2006

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5407
Facsimile: (202) 672-5399

By Phillip J. Anticola *Reg. No.*
38,819
for / David A. Blumenthal
Attorney for Applicant
Registration No. 26,257

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | | | | | |
|--|---|----|---|-------------------------------|---------------|
| Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: July 20, 2006 <i>(use as many sheets as necessary)</i> | | | | Complete if Known | |
| | | | | Application Number | Unassigned |
| | | | | Filing Date | 01/18/2005 |
| | | | | First Named Inventor | Tohru KIKUCHI |
| | | | | Group Art Unit | Unassigned |
| | | | | Examiner Name | Unassigned |
| | | | | Attorney Docket Number | 040373-0395 |
| Sheet | 1 | of | 1 | | |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|-----------------------|----------------------|-----------------------------------|---|---|---|
| Examiner Initials* | Cite No. ¹ | U.S. Patent Document | | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number | Kind Code ² (if known) | | | |
| | A1 | 2004/0014501 | A1 | KUWAHARA et al. | 01-22-2004 | |
| | A2 | 6,597,678 | B1 | KUWAHARA et al. | 07-22-2003 | |
| | A3 | 2003/0069047 | A1 | KITAHARA | 04-10-2003 | |
| | A4 | 6,433,738 | B1 | KIKUCHI | 08-13-2002 | |
| | A5 | 6,347,220 | B1 | TANAKA et al. | 02-12-2002 | |
| | A6 | 5,960,350 | | SCHORMAN et al. | 09-28-1999 | |

| UNPUBLISHED U.S. PATENT APPLICATION DOCUMENTS | | | | | | |
|---|-----------------------|----------------------------------|-----------------------------------|---|---|---|
| Examiner Initials* | Cite No. ¹ | U.S. Patent Application Document | | Name of Patentee or Applicant of Cited Document | Filing Date of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Serial Number | Kind Code ² (if known) | | | |
| | | | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|--------------------------|-----------------------|-------------------------|---------------------|-----------------------------------|--|---|---|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Name of Patentee or Applicant of Cited Documents | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Office ³ | Number ⁴ | Kind Code ⁵ (if known) | | | | |
| | A7 | JP | 2004-297750 | A | MITSUBISHI ELECTRIC CORP. | 10-21-2004 | | A |
| | A8 | JP | 2003-124856 | A | HITACHI KOKUSAI ELECTRIC IND. | 04-25-2003 | | A |
| | A9 | JP | 2003-124854 | A | MATSUSHITA ELECTRIC IND. CO. LTD. | 04-25-2003 | | A |
| | A10 | JP | 2002-135032 | A | NEC CORP. | 05-10-2002 | | A |
| | A11 | JP | 2001-007754 | A | TOSHIBA CORP. | 01-12-2001 | | A |
| | A12 | JP | 2001-505025 | A | MOTOROLA INC. | 04-10-2001 | | A |
| | A13 | JP | 2000-224097 | A | HITACHI LTD. | 08-11-2000 | | A |
| | A14 | JP | 11-266228 | | FUJITSU LTD. | 09-28-1999 | | A |

| NON PATENT LITERATURE DOCUMENTS | | | | |
|---------------------------------|-----------------------|--|----------------|--|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁶ | |
| | A15 | K. KIHIRA et al., "Closed-loop Mode Beam Selection Method in CDMA/FDD Systems", The Institute of Electronics, Information and Communication Engineers Gijutsu Kenkyu Hokoku, VOL. 102:464, 21 November 2002, pp. 5-16. | | |

| | |
|---------------------------|------------------------|
| Examiner Signature | Date Considered |
|---------------------------|------------------------|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.